

**For each question, you need to find the answer and show your work. Each problem is worth 3 points: one for the correct answer and two for showing your work. For some problems, you may just need to write out how you know you have the correct answer.**

1. Simplify:  $3(5 - 3) + 8$

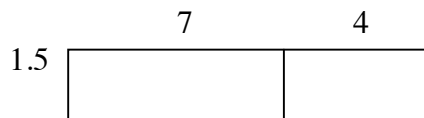
2. Evaluate:  $e - 2f$  where  $e = 5$  and  $f = 8$

3. Simplify:  $12a + 8b - 20r + 7b$

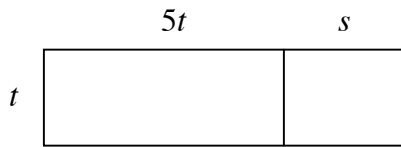
4. Six painters each used 3 gallons of paint for 4 rooms. On another project, 4 painters each used 6 gallons of paint for each of 3 rooms. Which property explains why both groups of painters used the same amount of paint?

5. If  $x + y = y$ , what is the value of  $xy$ ?

6. Find an expression that could be used to find the area of the large rectangle shown below.



7. Find an expression that could be used to find the area of the large rectangle shown below.



8. Simplify  $4m + 7n - 2m - 5n$ .

9. Which expression is a correct application of the distributive property?

a.  $4(x + 1) = 4x + 1$

b.  $7 + 3r = (7 + 3)r$

c.  $(3x + 5)y = 3x + 5y$

d.  $4f + 16g = 4(f + 4g)$

**Open-Ended Question: Answer the following question on a separate piece of paper. Make sure as you answer the open-ended question that you show your work AND explain how you know you are doing the correct work. YOU MUST EXPLAIN WHAT YOU ARE DOING!!!**

You order some CDs and DVDs from a catalog company. Each CD is \$10.98, and each DVD is \$16.95. All orders charge for shipping.

A. Write an expression that could be used to find the total amount you pay for any order.

B. You order 6 CDs and 4 DVDs. The total shipping cost of your order is \$4.68.

Use the expression from part A to find the amount you pay.